

Book Reviews

Methodology in medical genetics (2nd edition). Alan E. H. Emery. Churchill Livingstone, Edinburgh. 1986. Pp. 197. Price £24.00. ISBN 0443 03509 1.

This is an excellent concise little book. It provides practical coverage of many topics which are of interest to the more statistically inclined medical/human geneticist. There are 12 chapters in all and the topics include the bases of Hardy-Weinberg, genetic linkage, segregation analysis, multifactorial inheritance, disease associations, resolution of genetic heterogeneity and recognition and estimation of changes in disease frequency.

The structure of each chapter is very similar. For instance the chapter on twin studies, their use and limitations, states why twins are important in genetic studies before discussing variation in twinning rates, diagnoses of zygosity, concordance/discordance and the use of twin studies with continuous characters. The chapter concludes with a brief overview of the problems and limitations of twin studies. All these topics are covered in a mere 13 pages and there are worked examples where relevant. Consequently each chapter provides worked examples of the methods used as well as their advantages and disadvantages.

In summary, this book provides an ideal reference and worked guide for many of the most important areas of relevance to medical and human geneticists. Highly recommended for both student and staff.

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Breeding of silage maize. O. Dolstra and P. Miedema (eds). Pudoc, Wageningen. 1986. Pp. 191. Price Dfl. 80.00. ISBN 90 220 0895 9.

This book is a compilation of papers and abstracts of posters presented at the 13th Congress of the Maize and Sorghum section of Eucarpia held at Wageningen in September 1985.

The main topics covered are use of genetic resources, cold tolerance, improvement of feeding value and selection criteria for silage maize.

Breeders are currently very active in adapting silage maize varieties so that they can be reliably grown in cooler, more northerly areas. Many of the papers are consequently devoted to the effects of low temperatures upon growth, development and digestibility and the book is an absolute goldmine of information for those workers concerned with extending the geographical range of silage maize northwards.

It is pointed out by te Velde (Maize for Silage in the Netherlands, p3 *et seq.*) that in 1984 silage maize accounted for no less than 24 per cent of the total area under arable crops in the Netherlands. However, the growth in popularity of silage maize is due in part to a move towards more specialised farming methods as well as to the availability of improved varieties. It is further pointed out that yields of dry matter in the Netherlands are only about two-thirds of those obtained in southern Italy and that yield stability leaves much to be desired, being less reliable than winter rye.

It is clear that if silage maize is to continue its northward march, then much attention will have to be given to identifying and counteracting those factors which are the principal causes of yield instability in cool wet windy climates. In addition to cold tolerance, other problems include slow initial growth (which may not be related to cold tolerance), proneness to lodging, fungal diseases and, paradoxically, sensitivity to drought. For those working in northern climates, these problems must claim a higher priority than those associated with nutritive value or digestibility.

The book is well produced and commendably free from misprints. It is essential reading for all those involved in the improvement and testing of silage maize, especially in N.W. Europe.

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The genetics of the skeleton: Animal models of skeletal development. D. R. Johnson. Clarendon Press, Oxford. 1986. Pp. xvi+407. Price £45.00. ISBN 0 19 854183 5.

This book sets out to replace the classical but out of print work of H. Gruneberg (1963) *The pathology of development*. Dr Johnson retains most of the original section headings in that text but brings it right up to date with a mass of information and new concepts which have emerged in the intervening 2 decades. He does not attempt to review the whole field of inherited disease but concentrates on the skeleton. The 10 chapters describe animal models of disease processes, the membranous skeleton, the cartilagenous skeleton, the bony skeleton, the axial skeleton, the skull, face and palate, the teeth, limbs, the interaction between genes and teratogens and then finally enters a philosophical discussion of the validity of these animal models. In each section, the author first describes normal skeletal development, before comprehensively reviewing disorders and defects and the mutant genes responsible for